

any objection, which applicant denies is the case, introduced into the claims by the use of the indefinite article is removed. OK

One formal ground of rejection is imposed in the outstanding Official Action. Suffice it to say, that objection is directed to Claim 12. Claim 12 has been cancelled. As such, the formal ground of rejection is moot. OK

It is noted, however, that the basis for rejection of Claim 12, under 35 U.S.C. §112, first paragraph, applies equally to independent method Claim 7. That claim also recites the proviso regarding polyamide 4.6, a portion of which is deemed unsupported by the originally filed specification.

Claim 7 has been amended to delete the proviso portion of that claim insofar as that claim has additionally been amended to include a Markush group of polyamides within its scope. Insofar as that Markush group of polyamides does not include polyamide 4.6, the requirement for a limitation reciting that the polyamide is not polyamide 4.6 is unnecessary and therefore the elimination of the proviso is deemed proper. In any event, the deletion of the proviso eliminates any potential rejection of original Claim 7 as not being described in the specification and thus subject to rejection under 35 U.S.C. §112, first paragraph.

All the product claims, directed to a polyamide composition, Claims 2-8, 10, 12 and 13, stand rejected, under 35 U.S.C. §103(a), as being unpatentable over European Patent Application 0 390 277 to Gijssman.

As indicated above, independent Claim 12 has been cancelled. Thus, the sole independent claim directed to a polyamide composition is Claim 13. Claim 13 is limited to a composition which comprises a polyamide within the scope of the recited Markush group of that claim. Suffice it to say, that Markush group excludes polyamide 4.6. The first sentence

of the Gijsman application, at Page 2, line 1, recites that the invention relates to a copper-stabilized polyamide 4.6 composition. As such, the claims of the present application are totally distinguished from the composition of Gijsman. Indeed, the title of the Gijsman application is "Polyamide 4.6 Composition."

The argument advanced in the outstanding Official Action in rebuttal of this clear teaching is to the effect that Page 2, lines 50-52 of Gijsman recites that by "polyamide 4.6" it is understood to mean a polyamide substantially composed of tetramethylene adipamide units. The Gijsman specification continues that "substantially" means at least 50%, preferably at least 80%. That portion of the specification indicates that the polyamide may contain other polyamide-building units, such as caproamide, dicarboxylic- and diamine-derived units, polyester- and/or polyimide-building units.

That ~~relied-upon~~ portion of the Gijsman specification does nothing to enlarge the teaching of Gijsman to encompass polyamides within the scope of the claims of the present application. Each of the polyamides within the Markush group of Claim 13, from which each of amended dependent Claims 2-8 and 10 ultimately depend, have specific definitions which are outside the definition of the illustrated polyamide-building units within the contemplation of Gijsman. That is, the requirement of Gijsman necessitates that the polyamide be polyamide 4.6, outside the scope of the claims of the present application, or repeating units which correspond substantially to polyamide 4.6. Clearly, none of the polyamides recited within the scope of Claim 13, from which all the remaining composition claims depend, include repeating units which are within the contemplation of polyamide 4.6.

To establish that polyamide 4.6 is clearly distinguished from the well known polyamides within the contemplation of the Markush group of the present application,

applicant focuses upon the teaching of Gijsman at Page 2, line 21-22. Therein it is recited that the processing of polyamide 4.6 occurs at 300°C to 330°C. Those skilled in the art are aware that at that temperature range processing of polyamides within the scope of the amended claims of the present application, which can be substantiated by any number of standard references, is detrimental. That is, polyamides within the scope of the amended claims of this application cannot be processed at temperatures as high as 300°C, the minimum processing temperature of polyamides within the scope of the Gijsman disclosure. Those skilled in the art are aware that polyamide compositions within the contemplation of the present invention are processed at temperatures within the range of between about 220°C and about 270°C. As such, the polyamides within the scope of the amended claims are representative of a patentably distinct class of polyamides, outside the class that is encompassed by the specialty polyamide within the contemplation of Gijsman, polyamide 4.6.

The above remarks, it is respectfully submitted, establish that the applied Gijsman reference, limited as it is to a composition which includes copper stabilized polyamide 4.6, stabilized only under extreme high processing conditions, bears no resemblance to the claimed composition, limited as the claimed composition is to polyamides of the type processed at lower temperatures, in the range of about 220°C to about 270°C, such as polyamide 6 and polyamide 66. Indeed, the teaching of Gijsman emphasizes that special stabilizing copper compounds must be utilized in view of the high temperature processing of polyamide 4.6. Thus, one skilled in the art would not look to the special requirements, associated with the use of polyamide 4.6, in the stabilization of the polyamide compositions claimed herein.

It should be appreciated that two of the claims subject to rejection under 35 U.S.C. §103(a) are method claims. That is, Claims 7 and 8 are directed to a method of preparing a stabilized composition by mixing at least one polyamide, which, as amended, is limited to the Markush group recited in original Claim 13. However, the remarks made above, in support of the patentability of the polyamide composition of Claims 2-6 and 10, apply equally to the method of Claims 7 and 8. This is so insofar as the claimed method is limited to the same Markush group of polyamides recited in independent Claim 13.

The second substantive ground of rejection imposed in the outstanding Official Action is the rejection of Claims 2, 3, 7 and 9 as being anticipated, under 35 U.S.C. §102(b), by Gijsman.

Suffice it to say, Claim 9 was cancelled in applicant's previous amendment. Thus, the rejection of that claim is moot. Insofar as Claims 2 and 3 are concerned, these claims stand rejected, under 35 U.S.C. §103(a), by Gijsman. Suffice it to say, Claims 2 and 3 are patentable, under 35 U.S.C. §102(b), because they are directed to a class of polyamides clearly distinguished from the polyamide, polyamide 4.6, predominately present in the composition of Gijsman. It is furthermore submitted that any additional polymeric repeating group, in addition to that of polyamide 4.6, cannot be anticipated by Gijsman, limited as Gijsman is to a composition whose polymeric constituent is a repeating unit which includes polyamide 4.6, excluded from the Markush group of Claim 13, from which amended Claims 2 and 3 now depend. Reconsideration and removal of the rejection of Claims 2 and 3 is therefore deemed appropriate.

Insofar as the novelty of Claim 7 is concerned, Claim 7 has been amended to also require that the polyamide composition be a member of the Markush group originally recited in Claim 13. As such, this claim is similarly novel over the teaching of Gijsman.

That the above remarks establish novelty over Claims 2, 3 and 7 is established by the absence of any anticipatory rejection of Claim 13 which recited the same Markush group of polyamides, prior to the issuance of the outstanding Official Action and which is not presently subject to this ground of rejection. As such, the Official Action, in effect, admits to the novelty of these claims.

The third and final substantive ground of rejection is limited to Claim 11. That claim stands rejected, under 35 U.S.C. §103(a), as being unpatentable over Gijsman in further view of U.S. Patent 4,299,926 to Rody et al.

In response to applicant's previous traverse of the rejection of Claim 11 the outstanding Official Action argues that that traverse is unsupported by any evidence or documentation. That is, applicant previously argued that Claim 11 was patentable insofar as the limitation of that claim required the addition of at least one compound selected from the group consisting of organic phosphites, inorganic phosphonates, inorganic hypophosphites and mixtures thereof. The teaching of Rody et al., utilizing an organic phosphate, in combination with a sterically hindered polyalkylpiperidine, is directed to light stabilizers. Those skilled in the art are aware of the clear line of distinction between light stabilizers and thermal stabilizers. It is this argument that is dismissed as being unsupported by any reference.

Applicant meets the challenge presented in the outstanding Official Action. Enclosed herewith are Pages 204, 206, 209, 210 and 211 of Modern Plastics Encyclopedia '90

(Mid October issue). These pages are directed to stabilizers, which is a class of chemical additives added to plastics and polymers. That heat stabilizers, e.g. thermal stabilizers, are separately categorized from UV stabilizers, which is synonymous with ultraviolet light stabilizers, establishes the clear line of distinction between heat and light stabilizers.

Equally compelling, in support of the argument for patentability of Claim 11, is that the combined teaching of Gijsman and Rody et al. does not disclose or suggest the step of adding an organic phosphite, an inorganic phosphonate, an inorganic hypophosphite or mixtures thereof to a stabilized polyamide composition. This is so in that the Rody et al., the reference applied for this teaching, is limited to the introduction of an organic phosphate, a class of compounds outside the scope of the compounds within the Markush group of Claim 11.

It goes without saying that the patentability of Claim 11 is predicated upon an additional basis. That is, Claim 11 depends from Claim 7. Claim 7 is patentable for the reasons given above. As such, Claim 11, which adds the above discussed further limitation, is patentable on this further ground.

Applicant appreciates that Claim 7 has been amended to restrict the claimed method to the Markush group of polyamides recited in Claim 13, of record in the present application prior to final rejection. Since this limitation was previously searched and considered, no new search or further consideration of this claim is required. Moreover, it is apparent that this limitation better places this claim in condition for allowance or at least for appeal. Introduction of this amendment is therefore deemed appropriate. Such action is respectfully urged.

The above amendment and remarks establish the patentable nature of all the claims currently in this application. Notice of Allowance and passage to issue of these claims, Claims 2-8, 10, 11 and 13, is therefore respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Marvin Bressler", with a long horizontal flourish extending to the right.

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APPENDIX

RENDITION OF APPLICATION AMENDMENT SHOWING CHANGES MADE IN THE CLAIMS:

Claim 2 (Twice Amended): The [A] polyamide composition in accordance with Claim [12] 13 wherein said copper salt is selected from the group consisting of copper salts of an organic acid and copper salts of an inorganic acid.

Claim 3 (Twice Amended): The [A] polyamide composition in accordance with Claim [12] 13 wherein said copper salt is a cuprous halide.

Claim 4 (Twice Amended): The [A] polyamide composition in accordance with Claim [12] 13 wherein said aliphatic phosphate is selected from the group consisting of tris(tribromoneopentyl)phosphate, dibromodioxaphosphorinane derivatives and chlorine containing polyphosphonates.

Claim 5 (Twice Amended): The [A] polyamide composition in accordance with Claim [12] 13 wherein said aromatic compound is selected from the group consisting of decabromophenyl, decabromophenylether, [and] chlorinated dimethanedibenzo (a,e)-cyclooctane derivatives [dimethanedibenzo(a,b)-cyclooctane], tetrabromobisphenol A, chlorinated or brominated styrene oligomers, tetrabromobisphenol A derivatives and polydibromostyrene.

Claim 6 (Twice Amended): The [A] polyamide composition in accordance with Claim [12] 13 wherein said paraffin is chloroparaffin or bromoparaffin.

Claim 7 (Twice Amended): A method for the preparation of a stabilized composition comprising mixing at least one polyamide, said polyamide selected from the group consisting of polyamide 6, polyamide 66, polyamide 610, polyamide 11, polyamide 12,

PACM-12, MPB-1, PPD-T and an aramide, at least one copper salt and at least one organic halogen-containing compound selected from the group consisting of aromatic compounds, aliphatic phosphates, paraffins and mixtures thereof [with the proviso that if said organic halogen-containing compound is an aromatic compound, said polyamide is not polyamide 4.6 if said aromatic compound is a styrene oligomer or polymer or a halogen-substituted aromatic epoxy oligomer or polymer].

Claim 8 (Twice Amended): The [A] method in accordance with Claim 7 wherein said at least one copper salt and said at least one organic halogen-containing compound are added in the form of a masterbatch.

Claim 10 (Twice Amended): The [A] polyamide composition in accordance with Claim [12] 13, comprising at least one compound selected from the group consisting of organic phosphates, inorganic phosphonates, inorganic hypophosphates and mixtures thereof.

Claim 11 (Twice Amended): The [A] method for the preparation of a stabilized polyamide composition in accordance with Claim 7 comprising adding at least one compound selected from the group consisting of organic phosphites, inorganic phosphonates, inorganic hypophosphites and mixtures thereof.